

REISSUE PATENTS
JANUARY 1977 -- DECEMBER 2001



April 2002
U.S. PATENT AND TRADEMARK OFFICE
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A TECHNOLOGY ASSESSMENT AND FORECAST REPORT

Reissue Patents Report 1/1977 - 12/2001 Explanation of Data

This Technology Assessment and Forecast (TAF) Program Report profiles patent activity for U.S. reissue patents (hereafter referred to as patents) granted between **1977 and December 2001**. The source of the data used for this report is the TAF database maintained by the Information Products Division.

Data Distribution By Date of Grant and By Date of Application

Parts A1 and A2

Part A1 distributes patent GRANT data by year of patent grant ("Patents Granted By Date of Patent Grant"). Part A2 distributes grant data by the year in which the patented application was filed ("Patents Granted By Date of Patent Application"). Parts A1 and A2 each provide patent counts (pages A1-1 and A2-1) and percent distributions (pages A1-2 and A2-2).

Patent data in the "Pre 1988" column corresponds to the period **January 1, 1977 through December 31, 1987**.

Part B

Part B of this report distributes patent GRANT data for organizations that have received U.S. patents since 1977. Data are presented by the year in which the patent was granted ("Patents By Year of Grant") and the year the patented application was filed ("Patents by Year of Application").

DATA FOR THOSE APPLICATIONS WHICH WERE FILED BUT NEVER ISSUED (ROUGHLY 25% OF TOTAL FILINGS) ARE NOT INCLUDED IN THIS REPORT.

Since the average time period between filing for a patent and the issuing of the patent (i.e., a patent's "pendency") is now about 24 months, the patented application data for the most recent years are incomplete.* This is because a significant number of the applications filed in the most recent years, which will ultimately become patents, were still pending in **December 2001**. Since they had not yet become patents at the time this report was prepared, they were not included in this report.

Patented application data are of significant value since the date an application was filed more accurately reflects when the technology was developed. Additionally, fluctuations in data based on application date are much more likely to reflect changes in technological activity, since such fluctuations would for the most part be immune from changes in PTO processing such as occurred in years such as 1986 when the PTO issued fewer patents than would normally have been expected due to a lack of funds to print patents. Note that a patent's "pendency" can be quite variable from one patent to another thereby affecting the date of patent grant. Such variation in pendency is

determined by many factors, including PTO workload (which varies between technologies), budget and manpower levels, patent printing schedules, etc.

Parts of the Report

Parts A1 and A2 present tables which show, by number and percent, the patent activity. Part A1 presents data by year of patent grant ("Patents Granted by Date of Patent Grant"). Part A2 redistributes grant data by year of patent application ("Patents Granted by Date of Patent Application"). The location of patent origin is determined by the residence of the first-named inventor at the time of grant.

Information on **patent ownership** reflects ownership at the time of patent grant and does not include subsequent changes in ownership. If more than one assignee was declared at the time of grant, the patent is attributed to the first-named assignee. The U.S. and Foreign Corporations ownership categories count predominantly corporate patents; however, patents assigned to other organizations such as small businesses, nonprofit organizations, universities, etc. are also included in this category. While U.S. Government patent ownership includes only patents granted to the Federal Government, no such distinction is made for Foreign Government patents.

Part B is a ranked listing of national and international organizations (i.e., corporations, universities, government agencies) which have received 5 or more U.S. reissue patents since 1977. Data line 1 for each listed organization distributes counts of patent grants by year of grant. Data line 2 for each organization redistributes those same patent grants by year in which the patented application was filed. Information on patent ownership reflects ownership at the time of patent grant. Although a substantial effort has been made to combine name variations into a single organizational name, many organizations continue to have patents listed under more than one organizational name.

* As of **December 31, 2001**, UTILITY patent application data (most issued patent documents are utility patents) were approximately 79% complete for patent applications filed in 1998 and 53% complete for applications filed in 1999 and 16% complete for 2000 filings. They are essentially complete for applications filed prior to 1998. Currently, completion percentages restricted to reissue patents are not available.

Part A1

Patent Grants As Distributed By Year of Patent Grant

----- Patents Granted By Date Of Patent Grant (Granted: Jan 01, 1977 - Dec 31, 2001) -----

| | NUMBER OF PATENTS | | | | | | | | | | | | | | | |
|-----------------------|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| | Pre 1988 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | Total |
| Total | 3447 | 244 | 317 | 370 | 263 | 360 | 332 | 317 | 316 | 279 | 277 | 298 | 448 | 524 | 480 | 8272 |
| U.S. Origin | 2492 | 167 | 212 | 241 | 171 | 231 | 207 | 194 | 208 | 175 | 173 | 195 | 274 | 331 | 266 | 5537 |
| Foreign Origin | 955 | 77 | 105 | 129 | 92 | 129 | 125 | 123 | 108 | 104 | 104 | 103 | 174 | 193 | 214 | 2735 |
| JAPAN | 290 | 28 | 49 | 58 | 53 | 66 | 61 | 59 | 61 | 49 | 51 | 48 | 86 | 112 | 98 | 1169 |
| GERMANY | 184 | 20 | 16 | 15 | 8 | 19 | 13 | 18 | 9 | 9 | 10 | 15 | 20 | 13 | 23 | 392 |
| UNITED KINGDOM | 137 | 8 | 15 | 12 | 4 | 10 | 16 | 11 | 6 | 11 | 8 | 8 | 8 | 13 | 11 | 278 |
| FRANCE | 65 | 1 | 6 | 9 | 5 | 4 | 9 | 7 | 3 | 9 | 5 | 7 | 14 | 7 | 15 | 166 |
| CANADA | 50 | 2 | 5 | 9 | 6 | 5 | 6 | 9 | 5 | 5 | 4 | 7 | 8 | 10 | 11 | 142 |
| ITALY | 27 | 1 | 1 | 3 | 3 | 1 | 1 | 2 | 4 | 4 | 13 | 4 | 14 | 4 | 15 | 97 |
| NETHERLANDS | 39 | 5 | 2 | 2 | 5 | 6 | 3 | | 4 | 3 | 2 | 1 | 4 | 1 | 4 | 81 |
| SWITZERLAND | 34 | 6 | 1 | 6 | 3 | 4 | 2 | 2 | 3 | 5 | | 1 | 1 | 4 | 4 | 76 |
| SWEDEN | 41 | 1 | 1 | 3 | 2 | 3 | 3 | 1 | 1 | 1 | 3 | 2 | 4 | | 6 | 72 |
| AUSTRALIA | 16 | 1 | 1 | 1 | 1 | 3 | 1 | 4 | 1 | 1 | | 2 | 1 | 1 | 4 | 38 |
| DENMARK | 13 | 1 | | 2 | | 1 | 1 | 2 | | | 1 | 2 | 4 | 2 | 2 | 31 |
| ISRAEL | 6 | | 3 | 3 | | | 1 | | 1 | 2 | | 4 | 1 | 4 | 2 | 27 |
| SOUTH KOREA | | | | | | | 1 | | 1 | 2 | 1 | | 6 | 7 | 6 | 24 |
| AUSTRIA | 7 | | | 1 | | 2 | 2 | 1 | 1 | | | 2 | 1 | 2 | 2 | 21 |
| TAIWAN | 1 | 1 | | | | 2 | 1 | 2 | 1 | | 1 | | | 4 | 5 | 18 |
| BELGIUM | 11 | | 1 | 2 | | 1 | | | | | | | | 2 | | 17 |
| NORWAY | 11 | 2 | | | | | 1 | | | | | | 1 | | 1 | 16 |
| FINLAND | 3 | | 1 | 1 | | 1 | 1 | | 2 | | 1 | | 1 | 1 | | 12 |
| NEW ZEALAND | 5 | | | 2 | | | | | | 1 | | | | 1 | 3 | 12 |
| SPAIN | 1 | | | | | | | 2 | 1 | | 1 | | | 1 | | 6 |
| SOUTH AFRICA | 2 | | 1 | | | | 1 | | | | | | | 1 | | 5 |
| INDONESIA | 1 | | | | | | | | 2 | 1 | | | | | | 4 |
| CHINA,HONG KONG S.A.R | 1 | | | | | | 1 | | | | | | | 1 | 1 | 4 |
| BRAZIL | 1 | | 1 | | | | | | | | 1 | | | | | 3 |
| RUSSIAN FEDERATION | | | | | | | | | 1 | 1 | | | | 1 | | 3 |
| LIECHTENSTEIN | 1 | | | | | | | | 1 | | | | | | | 2 |
| CZECHOSLOVAKIA | 2 | | | | | | | | | | | | | | | 2 |
| HUNGARY | 2 | | | | | | | | | | | | | | | 2 |
| LUXEMBOURG | | | 1 | | 1 | | | | | | | | | | | 2 |
| IRELAND | | | | | 1 | | | | | | 1 | | | | | 2 |
| ARGENTINA | | | | | | | | 2 | | | | | | | | 2 |
| MEXICO | 1 | | | | | | | | | | 1 | | | | | 2 |
| THAILAND | | | | | | 1 | | | | | | | | | | 1 |
| GREECE | 1 | | | | | | | | | | | | | | | 1 |
| CHILE | 1 | | | | | | | | | | | | | | | 1 |
| PERU | | | | | | | | 1 | | | | | | | | 1 |
| Others (3) | 1 | | | | | | | | | | | | | 1 | 1 | 3 |
| Ownership: | | | | | | | | | | | | | | | | |
| U.S. Corporations | 2100 | 126 | 165 | 185 | 133 | 188 | 156 | 152 | 164 | 134 | 146 | 163 | 214 | 265 | 234 | 4525 |
| U.S. Government | 9 | 1 | | | 1 | 2 | 3 | 1 | 1 | | 1 | | 1 | 5 | 3 | 28 |
| U.S. Individuals | 463 | 40 | 51 | 61 | 44 | 47 | 52 | 45 | 49 | 46 | 33 | 39 | 66 | 64 | 43 | 1143 |
| Foreign Corporations | 741 | 70 | 85 | 107 | 78 | 112 | 105 | 110 | 96 | 91 | 92 | 93 | 158 | 180 | 180 | 2298 |
| Foreign Government | 8 | 1 | 2 | 3 | | 2 | 3 | 1 | | 1 | | 1 | | | 1 | 23 |
| Foreign Individuals | 126 | 6 | 14 | 14 | 7 | 9 | 13 | 8 | 6 | 7 | 5 | 2 | 9 | 10 | 19 | 255 |

---- Patents Granted By Date Of Patent Grant (Granted: Jan 01, 1977 - Dec 31, 2001) ----

| | PERCENT OF PATENTS | | | | | | | | | | | | | | | |
|-----------------------|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| | Pre 1988 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | Total |
| Total | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| U.S. Origin | 72 | 68 | 67 | 65 | 65 | 64 | 62 | 61 | 66 | 63 | 62 | 65 | 61 | 63 | 55 | 67 |
| Foreign Origin | 28 | 32 | 33 | 35 | 35 | 36 | 38 | 39 | 34 | 37 | 38 | 35 | 39 | 37 | 45 | 33 |
| JAPAN | 8 | 11 | 15 | 16 | 20 | 18 | 18 | 19 | 19 | 18 | 18 | 16 | 19 | 21 | 20 | 14 |
| GERMANY | 5 | 8 | 5 | 4 | 3 | 5 | 4 | 6 | 3 | 3 | 4 | 5 | 4 | 2 | 5 | 5 |
| UNITED KINGDOM | 4 | 3 | 5 | 3 | 2 | 3 | 5 | 3 | 2 | 4 | 3 | 3 | 2 | 2 | 2 | 3 |
| FRANCE | 2 | | 2 | 2 | 2 | 1 | 3 | 2 | 1 | 3 | 2 | 2 | 3 | 1 | 3 | 2 |
| CANADA | 1 | 1 | 2 | 2 | 2 | 1 | 2 | 3 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 |
| ITALY | 1 | | | 1 | 1 | | | 1 | 1 | 1 | 5 | 1 | 3 | 1 | 3 | 1 |
| NETHERLANDS | 1 | 2 | 1 | 1 | 2 | 2 | 1 | | 1 | 1 | 1 | | 1 | | 1 | 1 |
| SWITZERLAND | 1 | 2 | | 2 | 1 | 1 | 1 | 1 | 1 | 2 | | | | 1 | 1 | 1 |
| SWEDEN | 1 | | | 1 | 1 | 1 | 1 | | | | 1 | 1 | 1 | | 1 | 1 |
| AUSTRALIA | | | | | | 1 | | 1 | | | | 1 | | | 1 | 0 |
| DENMARK | | | | 1 | | | | 1 | | | | 1 | 1 | | | 0 |
| ISRAEL | | | 1 | 1 | | | | | | 1 | | 1 | | 1 | | 0 |
| SOUTH KOREA | | | | | | | | | | 1 | | | 1 | 1 | 1 | 0 |
| AUSTRIA | | | | | | 1 | 1 | | | | | 1 | | | | 0 |
| TAIWAN | | | | | | 1 | | 1 | | | | | | 1 | 1 | 0 |
| BELGIUM | | | | 1 | | | | | | | | | | | | 0 |
| NORWAY | | 1 | | | | | | | | | | | | | | 0 |
| FINLAND | | | | | | | | | 1 | | | | | | | 0 |
| NEW ZEALAND | | | | 1 | | | | | | | | | | | 1 | 0 |
| SPAIN | | | | | | | | 1 | | | | | | | | 0 |
| SOUTH AFRICA | | | | | | | | | | | | | | | | 0 |
| INDONESIA | | | | | | | | | 1 | | | | | | | 0 |
| CHINA,HONG KONG S.A.R | | | | | | | | | | | | | | | | 0 |
| BRAZIL | | | | | | | | | | | | | | | | 0 |
| RUSSIAN FEDERATION | | | | | | | | | | | | | | | | 0 |
| LIECHTENSTEIN | | | | | | | | | | | | | | | | 0 |
| CZECHOSLOVAKIA | | | | | | | | | | | | | | | | 0 |
| HUNGARY | | | | | | | | | | | | | | | | 0 |
| LUXEMBOURG | | | | | | | | | | | | | | | | 0 |
| IRELAND | | | | | | | | | | | | | | | | 0 |
| ARGENTINA | | | | | | | | 1 | | | | | | | | 0 |
| MEXICO | | | | | | | | | | | | | | | | 0 |
| THAILAND | | | | | | | | | | | | | | | | 0 |
| GREECE | | | | | | | | | | | | | | | | 0 |
| CHILE | | | | | | | | | | | | | | | | 0 |
| PERU | | | | | | | | | | | | | | | | 0 |
| Others (3) | | | | | | | | | | | | | | | | 0 |
| Ownership: | | | | | | | | | | | | | | | | |
| U.S. Corporations | 61 | 52 | 52 | 50 | 51 | 52 | 47 | 48 | 52 | 48 | 53 | 55 | 48 | 51 | 49 | 55 |
| U.S. Government | | | | | | 1 | 1 | | | | | | | 1 | 1 | 0 |
| U.S. Individuals | 13 | 16 | 16 | 16 | 17 | 13 | 16 | 14 | 16 | 16 | 12 | 13 | 15 | 12 | 9 | 14 |
| Foreign Corporations | 21 | 29 | 27 | 29 | 30 | 31 | 32 | 35 | 30 | 33 | 33 | 31 | 35 | 34 | 38 | 28 |
| Foreign Government | | | 1 | 1 | | 1 | 1 | | | | | | | | | 0 |
| Foreign Individuals | 4 | 2 | 4 | 4 | 3 | 3 | 4 | 3 | 2 | 3 | 2 | 1 | 2 | 2 | 4 | 3 |

Part A2

Patent Grants As Distributed By Year of Patent Application

---- Patents Granted By Date Of Patent Application (Granted: Jan 01, 1977 - Dec 31, 2001) ----

| | NUMBER OF PATENTED APPLICATIONS | | | | | | | | | | | | | | | |
|-----------------------|---------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| | Pre 1988 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | Total |
| Total | 4077 | 304 | 366 | 345 | 357 | 350 | 338 | 404 | 399 | 414 | 331 | 321 | 207 | 59 | | 8272 |
| U.S. Origin | 2925 | 192 | 232 | 216 | 217 | 224 | 210 | 253 | 236 | 271 | 201 | 192 | 129 | 39 | | 5537 |
| Foreign Origin | 1152 | 112 | 134 | 129 | 140 | 126 | 128 | 151 | 163 | 143 | 130 | 129 | 78 | 20 | | 2735 |
| JAPAN | 383 | 45 | 76 | 68 | 65 | 64 | 60 | 73 | 81 | 75 | 68 | 61 | 43 | 7 | | 1169 |
| GERMANY | 222 | 10 | 15 | 18 | 17 | 12 | 16 | 17 | 17 | 16 | 13 | 10 | 6 | 3 | | 392 |
| UNITED KINGDOM | 153 | 19 | 12 | 8 | 9 | 13 | 13 | 11 | 11 | 11 | 5 | 10 | 2 | 1 | | 278 |
| FRANCE | 72 | 8 | 5 | 10 | 7 | 6 | 7 | 9 | 16 | 8 | 4 | 9 | 3 | 2 | | 166 |
| CANADA | 57 | 7 | 7 | 7 | 9 | 6 | 7 | 7 | 6 | 7 | 8 | 6 | 6 | 2 | | 142 |
| ITALY | 29 | 3 | 3 | 1 | 3 | 4 | 4 | 11 | 16 | 3 | 10 | 4 | 5 | 1 | | 97 |
| NETHERLANDS | 47 | 6 | 1 | 5 | 4 | 5 | 1 | 2 | 4 | 1 | 3 | 1 | 1 | | | 81 |
| SWITZERLAND | 42 | 5 | 5 | 2 | 2 | 4 | 3 | 5 | 1 | 2 | 1 | 2 | 1 | 1 | | 76 |
| SWEDEN | 44 | 1 | 3 | 3 | 3 | 1 | 2 | 1 | 4 | 3 | 3 | 2 | 2 | | | 72 |
| AUSTRALIA | 17 | 1 | 2 | 2 | 6 | 1 | | 2 | | 3 | 1 | | 1 | 2 | | 38 |
| DENMARK | 14 | | 1 | 1 | 3 | | 2 | 2 | 3 | 3 | 1 | 2 | | | | 31 |
| ISRAEL | 9 | 3 | 1 | 1 | | 1 | 1 | 1 | 2 | 3 | 2 | 2 | 1 | | | 27 |
| SOUTH KOREA | | | | | 1 | | 3 | 2 | | 4 | 4 | 9 | 1 | | | 24 |
| AUSTRIA | 8 | | | | 2 | 3 | 1 | | | 3 | 1 | 2 | 1 | | | 21 |
| TAIWAN | 2 | | 1 | | 2 | 2 | 2 | | | 1 | | 3 | 5 | | | 18 |
| BELGIUM | 11 | 2 | | 2 | | | | | | | 1 | 1 | | | | 17 |
| NORWAY | 13 | | | | | 1 | | | 1 | | | 1 | | | | 16 |
| FINLAND | 5 | 1 | | 1 | 1 | 1 | 1 | 2 | | | | | | | | 12 |
| NEW ZEALAND | 5 | 1 | 1 | | | 1 | | 1 | | | 2 | | | 1 | | 12 |
| SPAIN | 1 | | | | 1 | | 1 | 1 | 1 | | 1 | | | | | 6 |
| SOUTH AFRICA | 3 | | | | 1 | | | | | | 1 | | | | | 5 |
| INDONESIA | 1 | | | | 1 | | 1 | 1 | | | | | | | | 4 |
| CHINA,HONG KONG S.A.R | 1 | | | | | 1 | | | | | | 2 | | | | 4 |
| BRAZIL | 2 | | | | | | | | 1 | | | | | | | 3 |
| RUSSIAN FEDERATION | | | | | | | 1 | 1 | | | | 1 | | | | 3 |
| CZECHOSLOVAKIA | 2 | | | | | | | | | | | | | | | 2 |
| HUNGARY | 2 | | | | | | | | | | | | | | | 2 |
| LUXEMBOURG | 2 | | | | | | | | | | | | | | | 2 |
| IRELAND | | | 1 | | | | 1 | | | | | | | | | 2 |
| ARGENTINA | | | | | 1 | | 1 | | | | | | | | | 2 |
| MEXICO | 1 | | | | | | | 1 | | | | | | | | 2 |
| LIECHTENSTEIN | 1 | | | | | | | 1 | | | | | | | | 2 |
| PORTUGAL | 1 | | | | | | | | | | | | | | | 1 |
| THAILAND | | | | | 1 | | | | | | | | | | | 1 |
| PERU | | | | | 1 | | | | | | | | | | | 1 |
| GREECE | 1 | | | | | | | | | | | | | | | 1 |
| Others (3) | 1 | | | | | | | | | | 1 | 1 | | | | 3 |
| Ownership: | | | | | | | | | | | | | | | | |
| U.S. Corporations | 2447 | 144 | 177 | 164 | 175 | 168 | 177 | 210 | 193 | 213 | 168 | 152 | 102 | 35 | | 4525 |
| U.S. Government | 10 | | 1 | 4 | 1 | 1 | 3 | | 2 | 3 | 1 | 1 | | 1 | | 28 |
| U.S. Individuals | 553 | 58 | 57 | 53 | 50 | 57 | 40 | 54 | 50 | 62 | 35 | 41 | 29 | 4 | | 1143 |
| Foreign Corporations | 912 | 91 | 112 | 110 | 119 | 115 | 109 | 130 | 148 | 128 | 120 | 119 | 66 | 19 | | 2298 |
| Foreign Government | 10 | 2 | 3 | 1 | 2 | 1 | 1 | | 1 | 2 | | | | | | 23 |
| Foreign Individuals | 145 | 9 | 16 | 13 | 10 | 8 | 8 | 10 | 5 | 6 | 7 | 8 | 10 | | | 255 |

---- Patents Granted By Date Of Patent Application (Granted: Jan 01, 1977 - Dec 31, 2001) ----

| | PERCENT OF PATENTED APPLICATIONS | | | | | | | | | | | | | | | |
|-----------------------|----------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| | Pre 1988 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | Total |
| Total | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | | 100 |
| U.S. Origin | 72 | 63 | 63 | 63 | 61 | 64 | 62 | 63 | 59 | 65 | 61 | 60 | 62 | 66 | | 67 |
| Foreign Origin | 28 | 37 | 37 | 37 | 39 | 36 | 38 | 37 | 41 | 35 | 39 | 40 | 38 | 34 | | 33 |
| JAPAN | 9 | 15 | 21 | 20 | 18 | 18 | 18 | 18 | 20 | 18 | 21 | 19 | 21 | 12 | | 14 |
| GERMANY | 5 | 3 | 4 | 5 | 5 | 3 | 5 | 4 | 4 | 4 | 4 | 3 | 3 | 5 | | 5 |
| UNITED KINGDOM | 4 | 6 | 3 | 2 | 3 | 4 | 4 | 3 | 3 | 3 | 2 | 3 | 1 | 2 | | 3 |
| FRANCE | 2 | 3 | 1 | 3 | 2 | 2 | 2 | 2 | 4 | 2 | 1 | 3 | 1 | 3 | | 2 |
| CANADA | 1 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | | 2 |
| ITALY | 1 | 1 | 1 | | 1 | 1 | 1 | 3 | 4 | 1 | 3 | 1 | 2 | 2 | | 1 |
| NETHERLANDS | 1 | 2 | | 1 | 1 | 1 | | | 1 | | 1 | | | | | 1 |
| SWITZERLAND | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | | | | 1 | | 2 | | 1 |
| SWEDEN | 1 | | 1 | 1 | 1 | | 1 | | 1 | 1 | 1 | 1 | 1 | | | 1 |
| AUSTRALIA | | | 1 | 1 | 2 | | | | | 1 | | | | 3 | | 0 |
| DENMARK | | | | | 1 | | 1 | | 1 | 1 | | 1 | | | | 0 |
| ISRAEL | | 1 | | | | | | | 1 | 1 | 1 | 1 | | | | 0 |
| SOUTH KOREA | | | | | | | 1 | | | 1 | 1 | 3 | | | | 0 |
| AUSTRIA | | | | | 1 | 1 | | | | 1 | | 1 | | | | 0 |
| TAIWAN | | | | | 1 | 1 | 1 | | | | | 1 | 2 | | | 0 |
| BELGIUM | | 1 | | 1 | | | | | | | | | | | | 0 |
| NORWAY | | | | | | | | | | | | | | | | 0 |
| FINLAND | | | | | | | | | | | | | | | | 0 |
| NEW ZEALAND | | | | | | | | | | | 1 | | | 2 | | 0 |
| SPAIN | | | | | | | | | | | | | | | | 0 |
| SOUTH AFRICA | | | | | | | | | | | | | | | | 0 |
| INDONESIA | | | | | | | | | | | | | | | | 0 |
| CHINA,HONG KONG S.A.R | | | | | | | | | | | | 1 | | | | 0 |
| BRAZIL | | | | | | | | | | | | | | | | 0 |
| RUSSIAN FEDERATION | | | | | | | | | | | | | | | | 0 |
| CZECHOSLOVAKIA | | | | | | | | | | | | | | | | 0 |
| HUNGARY | | | | | | | | | | | | | | | | 0 |
| LUXEMBOURG | | | | | | | | | | | | | | | | 0 |
| IRELAND | | | | | | | | | | | | | | | | 0 |
| ARGENTINA | | | | | | | | | | | | | | | | 0 |
| MEXICO | | | | | | | | | | | | | | | | 0 |
| LIECHTENSTEIN | | | | | | | | | | | | | | | | 0 |
| PORTUGAL | | | | | | | | | | | | | | | | 0 |
| THAILAND | | | | | | | | | | | | | | | | 0 |
| PERU | | | | | | | | | | | | | | | | 0 |
| GREECE | | | | | | | | | | | | | | | | 0 |
| Others (3) | | | | | | | | | | | | | | | | 0 |
| Ownership: | | | | | | | | | | | | | | | | |
| U.S. Corporations | 60 | 47 | 48 | 48 | 49 | 48 | 52 | 52 | 48 | 51 | 51 | 47 | 49 | 59 | | 55 |
| U.S. Government | | | | 1 | | | 1 | | 1 | 1 | | | | 2 | | 0 |
| U.S. Individuals | 14 | 19 | 16 | 15 | 14 | 16 | 12 | 13 | 13 | 15 | 11 | 13 | 14 | 7 | | 14 |
| Foreign Corporations | 22 | 30 | 31 | 32 | 33 | 33 | 32 | 32 | 37 | 31 | 36 | 37 | 32 | 32 | | 28 |
| Foreign Government | | 1 | 1 | | 1 | | | | | | | | | | | 0 |
| Foreign Individuals | 4 | 3 | 4 | 4 | 3 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 5 | | | 3 |

Part B

Ranked Listing of Organizations with Patent Grants

As Distributed By Year of Patent Grant

and As Distributed By Year of Patent Application

----- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 2001) ----- Ranked List of Organizations with 5 or More Patents -----

| | Pre 1988 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | TOTAL |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| HITACHI, LTD | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 19 | 2 | 11 | 13 | 7 | 7 | 13 | 4 | 4 | 3 | 4 | 7 | 0 | 7 | 7 | 108 |
| Patents By Year of Application: | 38 | 4 | 15 | 10 | 14 | 8 | 1 | 1 | 4 | 7 | 2 | 1 | 3 | 0 | 0 | 108 |
| GENERAL ELECTRIC COMPANY | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 37 | 2 | 1 | 3 | 6 | 5 | 8 | 2 | 3 | 2 | 2 | 1 | 2 | 2 | 0 | 76 |
| Patents By Year of Application: | 42 | 0 | 7 | 5 | 7 | 2 | 2 | 4 | 3 | 0 | 2 | 2 | 0 | 0 | 0 | 76 |
| AT&T CORP. | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 35 | 2 | 4 | 4 | 5 | 1 | 2 | 4 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 60 |
| Patents By Year of Application: | 45 | 1 | 4 | 1 | 1 | 6 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 60 |
| MINNESOTA MINING AND MANUFACTURING COMPANY | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 22 | 0 | 1 | 4 | 0 | 1 | 2 | 3 | 7 | 2 | 5 | 1 | 4 | 2 | 1 | 55 |
| Patents By Year of Application: | 24 | 3 | 2 | 2 | 1 | 5 | 5 | 4 | 2 | 3 | 3 | 0 | 1 | 0 | 0 | 55 |
| INTERNATIONAL BUSINESS MACHINES CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 20 | 0 | 0 | 1 | 1 | 7 | 0 | 2 | 1 | 3 | 1 | 0 | 6 | 5 | 5 | 52 |
| Patents By Year of Application: | 22 | 2 | 4 | 2 | 4 | 0 | 1 | 3 | 4 | 6 | 2 | 1 | 1 | 0 | 0 | 52 |
| E. I. DU PONT DE NEMOURS AND COMPANY | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 32 | 0 | 2 | 0 | 2 | 1 | 0 | 2 | 0 | 1 | 0 | 2 | 1 | 1 | 3 | 47 |
| Patents By Year of Application: | 35 | 1 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 0 | 47 |
| MITSUBISHI DENKI KABUSHIKI KAISHA | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 2 | 1 | 1 | 5 | 2 | 1 | 3 | 6 | 2 | 3 | 4 | 1 | 7 | 9 | 0 | 47 |
| Patents By Year of Application: | 5 | 2 | 2 | 4 | 5 | 5 | 4 | 1 | 6 | 6 | 4 | 3 | 0 | 0 | 0 | 47 |
| EASTMAN KODAK COMPANY | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 32 | 2 | 0 | 1 | 0 | 2 | 0 | 1 | 1 | 1 | 0 | 5 | 0 | 1 | 0 | 46 |
| Patents By Year of Application: | 34 | 1 | 1 | 1 | 1 | 0 | 0 | 3 | 0 | 2 | 2 | 0 | 1 | 0 | 0 | 46 |
| MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD. | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 8 | 0 | 0 | 0 | 4 | 0 | 0 | 1 | 2 | 1 | 3 | 2 | 4 | 7 | 9 | 41 |
| Patents By Year of Application: | 8 | 1 | 3 | 0 | 1 | 1 | 3 | 5 | 3 | 5 | 3 | 4 | 4 | 0 | 0 | 41 |
| BAYER AKTIENGESELLSCHAFT | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 20 | 3 | 2 | 2 | 1 | 2 | 0 | 3 | 1 | 0 | 0 | 1 | 1 | 2 | 2 | 40 |
| Patents By Year of Application: | 26 | 1 | 2 | 0 | 1 | 1 | 3 | 0 | 2 | 0 | 1 | 0 | 2 | 1 | 0 | 40 |
| SONY CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 8 | 1 | 0 | 4 | 2 | 0 | 0 | 3 | 1 | 2 | 1 | 2 | 1 | 7 | 6 | 38 |
| Patents By Year of Application: | 9 | 2 | 4 | 0 | 1 | 1 | 4 | 5 | 3 | 3 | 3 | 1 | 2 | 0 | 0 | 38 |

---- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 5 or More Patents ----

| | Pre 1988 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | TOTAL |
|-------------------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| CANON KABUSHIKI KAISHA | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 15 | 0 | 0 | 3 | 2 | 1 | 1 | 1 | 2 | 4 | 1 | 0 | 3 | 4 | 0 | 37 |
| Patents By Year of Application: | 17 | 2 | 2 | 2 | 1 | 2 | 3 | 0 | 4 | 1 | 3 | 0 | 0 | 0 | 0 | 37 |
| TOSHIBA CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 2 | 1 | 0 | 0 | 0 | 2 | 0 | 2 | 3 | 1 | 1 | 5 | 4 | 11 | 4 | 36 |
| Patents By Year of Application: | 3 | 0 | 1 | 1 | 0 | 2 | 4 | 2 | 7 | 2 | 5 | 7 | 1 | 1 | 0 | 36 |
| CATERPILLAR INC. | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 26 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 33 |
| Patents By Year of Application: | 26 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 33 |
| U.S. PHILIPS CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 18 | 0 | 2 | 0 | 1 | 4 | 1 | 1 | 1 | 0 | 2 | 0 | 1 | 0 | 1 | 32 |
| Patents By Year of Application: | 19 | 2 | 1 | 2 | 1 | 3 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 32 |
| MICRON TECHNOLOGY, INC. | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 8 | 8 | 8 | 3 | 30 |
| Patents By Year of Application: | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 7 | 21 | 0 | 0 | 0 | 0 | 0 | 30 |
| RCA CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| Patents By Year of Application: | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 |
| ASAHI KOGAKU KOGYO KABUSHIKI KAISHA | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 4 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 5 | 2 | 1 | 5 | 6 | 0 | 29 |
| Patents By Year of Application: | 5 | 0 | 0 | 0 | 3 | 1 | 1 | 6 | 9 | 4 | 0 | 0 | 0 | 0 | 0 | 29 |
| DOW CHEMICAL COMPANY | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 17 | 2 | 1 | 1 | 1 | 1 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 28 |
| Patents By Year of Application: | 20 | 1 | 1 | 0 | 1 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 |
| EATON CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 20 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 28 |
| Patents By Year of Application: | 21 | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 28 |
| FUJITSU LIMITED | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 2 | 0 | 0 | 1 | 3 | 0 | 2 | 0 | 1 | 0 | 0 | 2 | 4 | 5 | 7 | 27 |
| Patents By Year of Application: | 4 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 6 | 7 | 1 | 3 | 0 | 0 | 27 |
| XEROX CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 15 | 1 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 25 |
| Patents By Year of Application: | 19 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 25 |

---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 5 or More Patents ----

| | Pre | | | | | | | | | | | | | | | | |
|---------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|--|
| | 1988 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | TOTAL | |
| NIKON CORPORATION | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 4 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 2 | 3 | 2 | 4 | 5 | 24 | |
| Patents By Year of Application: | 5 | 0 | 0 | 1 | 1 | 1 | 0 | 2 | 4 | 4 | 1 | 3 | 2 | 0 | 0 | 24 | |
| RICOH COMPANY, LTD. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 4 | 0 | 1 | 2 | 0 | 1 | 1 | 0 | 2 | 0 | 2 | 0 | 3 | 2 | 6 | 24 | |
| Patents By Year of Application: | 4 | 3 | 2 | 0 | 1 | 1 | 0 | 3 | 0 | 4 | 3 | 1 | 2 | 0 | 0 | 24 | |
| MOTOROLA, INC. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 12 | 2 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 22 | |
| Patents By Year of Application: | 14 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 22 | |
| TEXAS INSTRUMENTS, INCORPORATED | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 7 | 0 | 0 | 3 | 1 | 1 | 1 | 1 | 2 | 2 | 0 | 0 | 1 | 3 | 0 | 22 | |
| Patents By Year of Application: | 8 | 2 | 3 | 2 | 0 | 1 | 1 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 22 | |
| ALLIED-SIGNAL INC. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 11 | 0 | 2 | 1 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 19 | |
| Patents By Year of Application: | 13 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | |
| ELI LILLY AND COMPANY | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 17 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | |
| Patents By Year of Application: | 17 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | |
| MOBIL OIL CORP. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 12 | 0 | 2 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 19 | |
| Patents By Year of Application: | 13 | 1 | 1 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | |
| NEC CORPORATION | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 9 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 2 | 19 | |
| Patents By Year of Application: | 10 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 1 | 1 | 0 | 19 | |
| SGS-THOMSON MICROELECTRONICS S.R.L. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 8 | 3 | 3 | 2 | 0 | 19 | |
| Patents By Year of Application: | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 6 | 7 | 2 | 1 | 0 | 0 | 0 | 0 | 19 | |
| MASSACHUSETTS INSTITUTE OF TECHNOLOGY | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 6 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 3 | 1 | 3 | 18 | |
| Patents By Year of Application: | 7 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 0 | 0 | 2 | 0 | 0 | 18 | |
| MINOLTA CAMERA CO., LTD. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 5 | 0 | 2 | 1 | 0 | 1 | 4 | 2 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 18 | |
| Patents By Year of Application: | 7 | 2 | 0 | 1 | 4 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | |

Ranked List of Organizations with 5 or More Patents ----

[illegible]

----- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 2001) ----- Ranked List of Organizations with 5 or More Patents -----

| | Pre 1988 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | TOTAL |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| BAXTER INTERNATIONAL INC. | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 11 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 16 |
| Patents By Year of Application: | 13 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| NIPPON GAKKI SEIZO KABUSHIKI KAISHA | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 13 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| Patents By Year of Application: | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| OLYMPUS OPTICAL CO., LTD. | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 2 | 0 | 0 | 0 | 1 | 3 | 1 | 1 | 1 | 0 | 1 | 0 | 2 | 1 | 3 | 16 |
| Patents By Year of Application: | 2 | 0 | 1 | 3 | 3 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 3 | 0 | 0 | 16 |
| WESTINGHOUSE ELECTRIC CORP. | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 13 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 16 |
| Patents By Year of Application: | 14 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| YAMAHA HATSUDOKI KABUSHIKI KAISHA, YAMAHA MOTOR CO., LTD. | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 4 | 1 | 0 | 1 | 0 | 1 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 2 | 16 |
| Patents By Year of Application: | 5 | 0 | 2 | 0 | 1 | 3 | 0 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 16 |
| DOW CORNING CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 7 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 15 |
| Patents By Year of Application: | 7 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 15 |
| GENERAL MOTORS CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 4 | 0 | 0 | 1 | 3 | 2 | 0 | 2 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 15 |
| Patents By Year of Application: | 4 | 1 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 15 |
| DEERE + COMPANY | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 12 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| Patents By Year of Application: | 13 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| NISSAN MOTOR COMPANY, LIMITED | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 7 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 14 |
| Patents By Year of Application: | 8 | 0 | 1 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 14 |
| OUTBOARD MARINE CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 6 | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 14 |
| Patents By Year of Application: | 10 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 14 |
| ROBERT BOSCH GMBH | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 9 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 14 |
| Patents By Year of Application: | 11 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 14 |

---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 5 or More Patents ----

| | Pre 1988 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | TOTAL |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| ROCKWELL INTERNATIONAL CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 11 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 14 |
| Patents By Year of Application: | 12 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 14 |
| CIBA-GEIGY CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 8 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 13 |
| Patents By Year of Application: | 8 | 0 | 1 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| FUJI PHOTO FILM CO., LTD | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 5 | 0 | 2 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 13 |
| Patents By Year of Application: | 7 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 13 |
| HONDA GIKEN KOGYO KABUSHIKI KAISHA (HONDA MOTOR CO., LTD.) | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 2 | 0 | 0 | 5 | 1 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 13 |
| Patents By Year of Application: | 3 | 3 | 4 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 13 |
| MONSANTO COMPANY, INC. | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 9 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 13 |
| Patents By Year of Application: | 10 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 13 |
| PROCTER + GAMBLE COMPANY | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 4 | 1 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 13 |
| Patents By Year of Application: | 5 | 0 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 13 |
| SGS-THOMSON MICROELECTRONICS S.A. | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 1 | 1 | 4 | 2 | 0 | 13 |
| Patents By Year of Application: | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 5 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 13 |
| SIEMENS AKTIENGESELLSCHAFT | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 7 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 13 |
| Patents By Year of Application: | 8 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 13 |
| LUCENT TECHNOLOGIES INC. | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 5 | 4 | 12 |
| Patents By Year of Application: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 3 | 1 | 1 | 1 | 1 | 0 | 12 |
| VICTOR COMPANY OF JAPAN, LIMITED | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 1 | 0 | 0 | 3 | 0 | 12 |
| Patents By Year of Application: | 4 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 12 |
| YAMAHA CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 4 | 12 |
| Patents By Year of Application: | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 12 |

---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 5 or More Patents ----

| | Pre | | | | | | | | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|--|
| | 1988 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | TOTAL | |
| DANA CORPORATION | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 2 | 1 | 1 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 11 | |
| Patents By Year of Application: | 6 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 11 | |
| HOECHST AKTIENGESELLSCHAFT | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 11 | |
| Patents By Year of Application: | 6 | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | |
| HOFFMANN-LA ROCHE INC. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 8 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 11 | |
| Patents By Year of Application: | 8 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 11 | |
| MOLEX INCORPORATED | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 2 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 2 | 0 | 2 | 0 | 0 | 1 | 11 | |
| Patents By Year of Application: | 3 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 11 | |
| OLIN CORPORATION | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 7 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 11 | |
| Patents By Year of Application: | 9 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | |
| SCHLUMBERGER TECHNOLOGY CORPORATION | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 7 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 11 | |
| Patents By Year of Application: | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 11 | |
| SHARP KABUSHIKI KAISHA (SHARP CORPORATION) | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 3 | 11 | |
| Patents By Year of Application: | 2 | 0 | 2 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 11 | |
| SHELL OIL COMPANY | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 6 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 11 | |
| Patents By Year of Application: | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 11 | |
| UPJOHN COMPANY | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 8 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | |
| Patents By Year of Application: | 8 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | |
| AMOCO CORPORATION | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 7 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 10 | |
| Patents By Year of Application: | 7 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| MEDTRONIC INC. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 10 | |
| Patents By Year of Application: | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 10 | |

---- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 5 or More Patents ----

| | Pre 1988 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | TOTAL |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| NATIONAL RESEARCH DEVELOPMENT CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 6 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| Patents By Year of Application: | 6 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| OTIS ENGINEERING CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 9 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| Patents By Year of Application: | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| PAPST LICENSING GMBH & CO. KG | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 3 | 10 |
| Patents By Year of Application: | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 2 | 2 | 1 | 0 | 0 | 0 | 10 |
| BETHLEHEM STEEL CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 9 |
| Patents By Year of Application: | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| BORG-WARNER CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| Patents By Year of Application: | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| BRISTOL-MYERS SQUIBB COMPANY | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 9 |
| Patents By Year of Application: | 6 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| BROTHER KOGYO KABUSHIKI KAISHA | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 1 | 0 | 1 | 0 | 0 | 9 |
| Patents By Year of Application: | 2 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| CHEVRON RESEARCH & TECHNOLOGY CO. | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 6 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 9 |
| Patents By Year of Application: | 7 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| HEWLETT-PACKARD COMPANY | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 9 |
| Patents By Year of Application: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 9 |
| KONICA CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 9 |
| Patents By Year of Application: | 1 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 9 |
| ROHM AND HAAS COMPANY | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 7 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 9 |
| Patents By Year of Application: | 7 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 9 |

[illegible]

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 5 or More Patents ----

[illegible]

---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 5 or More Patents ----

| | Pre | | | | | | | | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|--|
| | 1988 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | TOTAL | |
| HALLIBURTON CO. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| Patents By Year of Application: | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| HOBART CORPORATION | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 6 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| Patents By Year of Application: | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| HUGHES AIRCRAFT COMPANY | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 3 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| Patents By Year of Application: | 4 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| LG ELECTRONICS INC. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 7 | |
| Patents By Year of Application: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 1 | 0 | 0 | 7 | |
| MERCK + CO., INC. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 7 | |
| Patents By Year of Application: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 7 | |
| NIPPONDENSO CO., LTD. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 1 | 0 | 1 | 0 | 0 | 7 | |
| Patents By Year of Application: | 1 | 0 | 0 | 1 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| OWENS-ILLINOIS INC. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| Patents By Year of Application: | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| PITNEY-BOWES, INC. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 5 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| Patents By Year of Application: | 5 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| SECRETARY OF STATE FOR DEFENCE IN HER BRITANNIC MAJESTY'S GOVERNMENT OF THE UNITED KINGDOM | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 7 | |
| Patents By Year of Application: | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 7 | |
| STAUFFER CHEMICAL COMPANY | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| Patents By Year of Application: | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | |
| UNITED STATES OF AMERICA, NAVY | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 7 | |
| Patents By Year of Application: | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 7 | |

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----- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 2001) ----- Ranked List of Organizations with 5 or More Patents -----

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----- Ranked List of Organizations with 5 or More Patents -----

[illegible]

---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 5 or More Patents ----

| | Pre | | | | | | | | | | | | | | | | |
|----------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|--|
| | 1988 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | TOTAL | |
| USX CORPORATION | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 6 | |
| Patents By Year of Application: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | |
| W. R. GRACE & CO.-CONN. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | |
| Patents By Year of Application: | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | |
| WESTVACO CORPORATION | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 6 | |
| Patents By Year of Application: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 6 | |
| 3M INNOVATIVE PROPERTIES COMPANY | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 5 | |
| Patents By Year of Application: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 0 | 5 | |
| AIR PRODUCTS AND CHEMICALS, INC. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 5 | |
| Patents By Year of Application: | 2 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | |
| AKZO N.V. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | |
| Patents By Year of Application: | 2 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| AMPEX CORP. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| Patents By Year of Application: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| ATELIERS DES CHARMILLES S.A. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| Patents By Year of Application: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| ATLANTIC RICHFIELD COMPANY | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 5 | |
| Patents By Year of Application: | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| AUTOMOTIVE PRODUCTS PLC | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| Patents By Year of Application: | 1 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| BOEHRINGER MANNHEIM G.M.B.H. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 5 | |
| Patents By Year of Application: | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | |

[illegible]

---- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 5 or More Patents ----

| | Pre 1988 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | TOTAL |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| KENNAMETAL INC. | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 |
| Patents By Year of Application: | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 5 |
| L'OREAL S.A. | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 |
| Patents By Year of Application: | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 5 |
| LAITRAM CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Patents By Year of Application: | 2 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| LUBRIZOL CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 5 |
| Patents By Year of Application: | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| MAX-PLANCK-GESELLSCHAFT ZUR FORDERUNG DER WISSENSCHAFTEN E.V | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 |
| Patents By Year of Application: | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 5 |
| MOLINS LIMITED | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Patents By Year of Application: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| NIPPON SEIKO KABUSHIKI KAISHA | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 1 | 0 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Patents By Year of Application: | 1 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| NIPPON THOMPSON CO., LTD. | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| Patents By Year of Application: | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| NORTHERN TELECOM LIMITED | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 5 |
| Patents By Year of Application: | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 5 |
| PPG INDUSTRIES INC. | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Patents By Year of Application: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| ROCKY RESEARCH | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 5 |
| Patents By Year of Application: | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 5 |

---- Organizational Patenting (Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 5 or More Patents ----

| | Pre 1988 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | TOTAL |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| ROLLS-ROYCE PLC | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 5 |
| Patents By Year of Application: | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| SANDEN CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 5 |
| Patents By Year of Application: | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| SANTA FE INTERNATIONAL CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Patents By Year of Application: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| SCM CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Patents By Year of Application: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| SEGA ENTERPRISES, LTD. | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 1 | 0 | 5 |
| Patents By Year of Application: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 5 |
| SEMICONDUCTOR ENERGY LABORATORY CO., LTD. | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 5 |
| Patents By Year of Application: | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 5 |
| STERLING DRUG INC. | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Patents By Year of Application: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| SUMITOMO CHEMICAL COMPANY, LIMITED | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 5 |
| Patents By Year of Application: | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| SUNDSTRAND CORPORATION | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Patents By Year of Application: | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| TEKTRONIX INC. | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Patents By Year of Application: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| TELEFONAKTIEBOLAGET LM ERICSSON | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 2 | 5 |
| Patents By Year of Application: | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 5 |

---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2001) ---- Ranked List of Organizations with 5 or More Patents ----

| | Pre | | | | | | | | | | | | | | | | |
|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|--|
| | 1988 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | TOTAL | |
| TORAY INDUSTRIES INC. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 5 | |
| Patents By Year of Application: | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | |
| TORO COMPANY | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | |
| Patents By Year of Application: | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 5 | |
| TORRINGTON COMPANY | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| Patents By Year of Application: | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| UNIROYAL, INC. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| Patents By Year of Application: | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| UNIVERSITY OF MINNESOTA, THE REGENTS OF | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| Patents By Year of Application: | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| WACOM CO., LTD. | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | |
| Patents By Year of Application: | 0 | 0 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| WISCONSIN ALUMNI RESEARCH FOUNDATION | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | |
| Patents By Year of Application: | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | |
| ZENITH ELECTRONICS CORPORATION | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | |
| Patents By Year of Application: | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| Other Organizations (3331) | | | | | | | | | | | | | | | | | |
| Patents By Year of Grant: | 1670 | 133 | 168 | 185 | 129 | 199 | 171 | 165 | 157 | 146 | 162 | 174 | 244 | 287 | 285 | 4275 | |
| Patents By Year of Application: | 2010 | 162 | 164 | 180 | 191 | 181 | 181 | 223 | 213 | 209 | 210 | 191 | 119 | 41 | 0 | 4275 | |